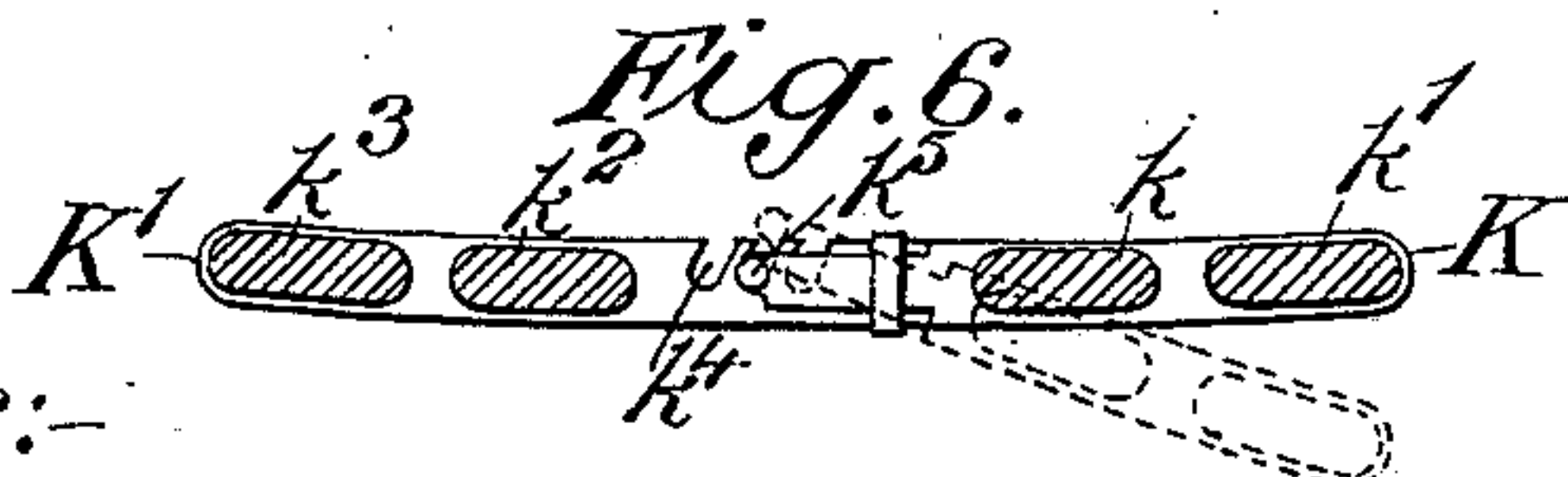


I. E. PALMER.  
CHAIR.

Patented May 17, 1898.



George Barry Jr.  
Edward Visser.

Isaac E. Palmer  
by attorneys  
Wm. L. Loomis.





# UNITED STATES PATENT OFFICE.

ISAAC E. PALMER, OF MIDDLETOWN, CONNECTICUT.

## CHAIR.

SPECIFICATION forming part of Letters Patent No. 604,212, dated May 17, 1898.

Application filed April 29, 1897. Serial No. 634,326. (No model.)

*To all whom it may concern:*

Be it known that I, ISAAC E. PALMER, of Middletown, in the county of Middlesex and State of Connecticut, have invented a new and useful Improvement in Chairs, of which the following is a specification.

My invention relates to an improvement in chairs in which provision is made for adjusting and removing the seat and back at pleasure.

A practical embodiment of my invention is represented in the accompanying drawings, in which—

Figure 1 is a view of the chair in front elevation. Fig. 2 is a transverse section through the line 2 2 of Fig. 1. Fig. 3 is a vertical section from front to rear. Fig. 4 is a similar view of a modified form. Fig. 5 is a cross-section through one of the side rails of the form shown in Fig. 4, the section being taken in the plane of the line 5 5 of the said figure. Fig. 6 is an enlarged view in detail, showing a vertical section through the seat-frame from front to rear and in dotted lines the position which the parts assume in changing the length of the seat-frame; and Fig. 7 is a top plan view of the same.

The particular structure of the chair-frame exclusive of the cross bars or rungs at the front of the seat and upper portion of the back is not material and may be of any of the forms in common use adapted to the purposes in hand, my invention being directed particularly to a support for the seat and back and head of the occupant which may be adjusted and removed at pleasure.

In the present instance I have shown, to illustrate my invention, a chair having side frames, each consisting of a front leg A, a rear leg A', a rail B, connecting the front and rear legs, a back standard or side rail C, an arm D, and an arm-supporting standard D'. The side frames as thus constituted are firmly connected by means of a rear cross-brace B', a front sectional cross-brace composed of the spaced sections E E', and a sectional cross-brace at the upper portion of the back composed of the sections F F'. The sectional braces E E' and F F' may either be formed of two separate sections extending between the side frames of the chair and spaced a short distance from one another, each section being separately secured to the side frames at

its ends, or the two sections may be united in any well-known or approved manner at their adjacent ends and connected as one piece to the side frames, as found most desirable, the feature of construction to which my present invention is directed being a spacing apart of the two sections E E' and F F' throughout the entire or greater portion of the distance between the two side frames of the chair.

The seat and back of the chair, apart from the chair-frame hereinabove described, consists of a piece or strip of fabric G of any suitable texture and either plain or ornamented, as may be desired, having its upper end engaged with the sectional cross-brace F F' and its lower or front end engaged with the sectional cross-brace E E'.

The manner of engaging the fabric G with the cross-brace at its end consists in passing the fabric over the two parts of the brace and then returning it between the two and over the one over which the fabric leading from the seat or back was first passed in being placed around the two sections, in which position the end of the fabric will be securely held by the binding effect upon its end due to the pressure of the outer layer of fabric upon the returned free end of the fabric when weight is applied to the seat and back of the chair by a person occupying it.

To illustrate the fastening of the end of the fabric somewhat more in detail—as, for example, at the front of the chair—the fabric is first passed over the two sections E E' of the cross-brace, then back between the two sections E E', and rearwardly over the section E beneath the layer of fabric which was first passed over the section E, as clearly shown in Fig. 3. The fabric so engaged with the cross-braces E E' and F F', when given a sufficient slack, as shown in Fig. 4, to form a seat, may be utilized without any further manipulation, the amount of slack being at any time regulated by taking up or letting out at either end of the fabric, and its removal may be quickly and easily accomplished at pleasure for purposes of cleansing or changing.

To afford a seat, back, and head-rest in addition to the fabric G, which may be adjusted to suit the convenience of the occupant of



the chair, I provide at the back frames, one of which, for supporting a head-rest, consists of three cross-rungs  $h\ h'\ h^2$ , connected by end bars H and H', and the other, for the back-rest support, consisting of three cross-rungs  $i\ i'\ i^2$ , connected by end bars I and I'. These frames I place in position by passing the fabric G back of the rungs  $h\ h^2$  and in front of the rung  $h'$  of the head-rest support and back of the rungs  $i\ i^2$  and in front of the rung  $i'$  of the back-rest, by which arrangement the two frames may be adjusted higher or lower at pleasure along the fabric G, as may be desired. It is intended that the frame, as above described, shall receive any suitable upholstery at the front to receive the back and head, as may be desired.

At the seat I provide a sectional frame, one of the sections consisting of two cross-rungs  $k\ k'$ , connected by end bars K, and the other of two cross-rungs  $k^2\ k^3$ , connected by end bars K', the end bars K K' being extended toward each other, as clearly shown in Figs. 3 and 6, and arranged to interlock by providing one of the bars—as, for example, K'—with a series of notches  $k^4$  and the overlapping bar K with a tongue  $k^5$ , adapted to enter in one of the notches  $k^4$ , the end of the bar K' being further provided with a tongue  $k^6$ , adapted to rest over the edge of the bar K. By this arrangement the sections of the seat-frame may be brought nearer to each other or extend away from each other to give the seat-frame a shorter or longer length from front to rear, as may be desired. The fabric G is shown in Fig. 3 as made to pass beneath the cross-rung  $k'$ , then over the cross-rungs  $k$  and  $k^2$ , and then beneath the rung  $k^3$ . This seat-frame, like the back and head rest frames, is intended to receive any suitable cushion or upholstery that may be found desirable to add to the comfort of the occupant.

The side rails of the back and base of the chair-frame, one or both, in the present instance both, are provided with elongated slots (denoted by  $c$  and  $b$ , respectively) extending through the rails, the one from front to rear and the other from top to bottom, for the purpose of securing in position the fabric which may be stretched across the back and seat, one or both, at pleasure. In the illustration shown in Figs. 1 and 2 this cross fabric consists of a band (denoted by L) of sufficient width to form either a head or back rest, and it is secured in position by passing it at its opposite ends in front of the side rails of the back, then around the said rails to the rear, then back toward the front through the slots  $c$ , and thence over the inner sections of the back, beneath the body of the fabric L. One or more of these bands of fabric L may be employed at pleasure either without or with the adjustable back and head rest frames,

and it is obvious that the fabric G itself might be provided with extended wings at the back or seat, or both, to be fastened in a manner quite similar to that shown in connection with the band L.

It is obvious that the slots  $c$  and  $b$  might be formed by spacing independent strips from the inner edges of the back and base rails instead of perforating the said rails themselves.

The above-described arrangement for removably securing transverse strips or bands of fabric to the side rails forms the subject-matter of a divisional application, and the matter is shown and described herein only for the purpose of showing the structure complete, which admits of utilizing either the adjustable frames or the cross-strips at pleasure in connection with the chair.

A chair constructed as hereinabove described admits of removing the fabric which forms the seat and back at pleasure to change the color or style of fabric or for cleansing purposes, and also admits of changing the inclination of the seat with respect to the back, and for adjusting the back and head rest and changing the length of the seat-rest from front to rear, the several adjustments and interchanges being provided for in such a simple manner that the most unskilled persons can readily make the changes and adjustments.

What I claim is—

1. The combination with a suitable chair-frame provided with separate cross bars or rungs placed in groups at intervals along the frame, of a fabric adapted to form a support for the body of the occupant said fabric having a return fold passing around one of the rungs of each group, and thence between a rung and the fabric which passes over the rung, for removably securing the fabric in position, substantially as set forth.

2. The combination with a suitable chair-frame and cross-rungs arranged in groups at intervals along the frame, of a fabric removably secured to said groups of cross-rungs and one or more frames adjustably engaged with the fabric, said frames being adapted to receive upholstery, substantially as set forth.

3. The combination with a suitable chair-frame and cross-rungs arranged in groups at intervals along the frame, of a fabric removably secured to said groups of cross-rungs to form a support for the body of the occupant and a sectional seat-frame, constructed to be extended and contracted, adjustably secured to the fabric, for receiving a cushion, substantially as set forth.

ISAAC E. PALMER.

Witnesses:

E. B. WETMORE,  
JOSEPH A. O'NEILL.